

CLAIMS

1-7. (Cancelled)

8. (Original) A method of dynamically assigning a home agent, the method comprising the steps of:

receiving an indication of the availability of one or more home agents;

receiving an access request message indicating a request for mobile IP services, the access request message having a first home agent address and a first home address;

determining whether the first home agent address and the first home address indicate a request for dynamic home agent assignment;

upon a determination that the first home agent address and the first home address indicate a request for dynamic home agent assignment, performing the substeps of:

assigning the home agent from a pool of available home agents; and

transmitting a second home agent address of the home agent;

request for a particular home agent;

upon a determination that the first home agent address and the first home address indicate a request for a particular home agent, transmitting the home agent address of the particular home agent;

determining whether the first home agent address and the first home address indicate a request for a particular home agent address;

upon a determination that the first home agent address and the first home address indicate a request for a particular home address, transmitting the home agent address of the home agent containing the particular home address;

determining whether the first home agent address and the first home address indicate a request for a static home agent; and

upon a determination that the first home agent address and the first home address indicate a request for a static home address, transmitting the home agent address of the static home address.

9. (Original) The method of Claim 8, further comprising the step of transmitting by the home agent a periodic heartbeat message.

10. (Original) The method of Claim 8, wherein the access request message is a RADIUS ACCESS REQUEST message.

11. (Original) The method of Claim 8, wherein the step of transmitting further comprises transmitting the home agent address in a RADIUS ACCESS ACCEPT message.

12. (Original) The method of Claim 8, wherein the step of assigning the home agent further comprises the step of selecting a preferred home agent, wherein the preferred home agent is determined by at least one of round robin scheduling, weighted least connections scheduling, sticky connections scheduling, and weighted least load first scheduling.

13. (Original) The method of Claim 8, wherein the step of assigning the home agent from a pool of available home agents is performed by the steps of:

receiving a status message from one or more of the pool of one or more home agents;

determining whether the status message includes an AVAILABLE indication or a NOT AVAILABLE indication;

upon a determination that the status message includes an AVAILABLE indication, indicating that the home agent is available; and

upon a determination that the status message includes a NOT AVAILABLE indication, indicating that the home agent is not available.

14-20. (Cancelled)

21. (Original) An apparatus for dynamically assigning a home agent, the apparatus comprising:

means for receiving an indication of the availability of one or more home agents;

means for receiving an access request message indicating a request for mobile IP services, the access request message having a first home agent address and a first home address;

means for determining whether the first home agent address and the first home address indicate a request for dynamic home agent assignment;

means, upon a determination that the first home agent address and the first home address indicate a request for dynamic home agent assignment, for assigning the home agent from a pool of available home agents, and transmitting a second home agent address of the home agent;

means for determining whether the first home agent address and the first home address indicate a request for a particular home agent;

means, upon a determination that the first home agent address and the first home address indicate a request for a particular home agent, for transmitting the home agent address of the particular home agent;

means for determining whether the first home agent address and the first home address indicate a request for a particular home agent address;

means, upon a determination that the first home agent address and the first home address indicate a request for a particular home address, for transmitting the home agent address of the home agent containing the particular home address;

means for determining whether the first home agent address and the first home address indicate a request for a static home agent; and

means, upon a determination that the first home agent address and the first home address indicate a request for a static home address, for transmitting the home agent address of the static home address.

22. (Original) The apparatus of Claim 21, further comprising means for transmitting by the home agent a periodic heartbeat message.

23. (Original) The method of Claim 21, wherein the step of assigning the home agent from a pool further comprises the step of selecting a preferred home agent, wherein the preferred home agent is determined by at least one of round robin scheduling, weighted least connections scheduling, sticky connections scheduling, and weighted least load first scheduling.

24. (Original) The apparatus of Claim 21, wherein the means for assigning the home agent from a pool of available home agents further comprises:

means for receiving a status message from one or more of the pool of one or more home agents;

means for determining whether the status message includes an AVAILABLE indication or a NOT AVAILABLE indication;

means, upon a determination that the status message includes an AVAILABLE indication, for indicating that the home agent is available; and

means, upon a determination that the status message includes a NOT AVAILABLE indication, for indicating that the home agent is not available.

25-26. (Cancelled)